Remarks/Arguments:

Figures 4 and 6 were objected to for not being designated as Prior Art. These figures have been appropriately amended.

Claims 1-7 are pending in the above-identified application. New claims 6 and 7 have been added.

Claims 1-5 were rejected under 35 U.S.C. § 103 (a) as being unpatentable over Applicants admitted prior art (AAPA) and JP publication no. 2002-119058 to Takegami (Densei Lambda). Claim 1 is amended to include,

> ... the third switching element is turned on during an OFF period of the first switching element and turned off during an ON period of the first switching element ...

Basis for these amendments may be found, for example, in the specification at page 7, line 3 to page 8, line 3 and Figs. 1-2.

Applicants exemplary embodiment includes a drive circuit 5 that supplies a voltage to a first switching element 3 and a third switching element 20. (Fig. 1). That is, drive circuit 5 drives both the first switching element 3 and the third switching element 20. Thus, both the first and second switching elements 3 and 5 are controlled by the same output voltage. (See page 7, line 3 to page 8, line 3). The output voltage of the first switching element 3 is shown in the first voltage waveform at point a of Fig. 2. The output voltage of the drive circuit 5 is shown in the second voltage waveform at point b of Fig. 2.

As shown in Fig. 2, when the first switching element 3 is in an OFF period from t_6 to t_1, the drive circuit 5 supplies substantially a voltage to the third switching element 20 from t_6 to t_1. Thus, "...the third switching element is turned on during an OFF period of the first switching element," as recited in claim 1. When the first switching element 3 is an ON period from t_1 to t_6, the drive circuit 5 supplies substantially 0 voltage to the third switching element 20 from t_1 to t_6. Thus, the third switching element "...is turned off during an ON period of the first switching element," as recited in claim 1.

Takegami includes a control pulse generating circuit 12 (driving circuit), a switching element 2 and a switching element 5. The output voltage from the driving circuit 12 drives switching element 2. (Figs. 1 and 2(b)). The voltage driving switching element 5 is the voltage output from isolator 15, which narrowly converts the voltage from driving circuit 12. (Fig. 1 and 2(d)). As shown in Figs. 2(b) and 2(d), switching element 5 (third switching element) is turned on when switching element 2 (first switch element) is in an ON period. Thus, Takegami does not disclose, "...the third switching element is turned on during an OFF period of the first switching element," as recited in claim 1. Applicants claimed features are advantageous over the prior art because the efficiency of power conversion is higher due to the third switching element having a longer ON period.

Thus, claim 1 is allowable over the art of record. Claims 2-5 depend from claim 1. Accordingly, claims 2-5 are allowable over the art of record.

Claim 2 includes patentable features in addition to the features of claim 1, namely,

> ... an OFF period of the second switching element is longer than the OFF period of the first switching element,
>
> a timing when the first switching element is turned off is later than a timing when the second switching element is turned off, and
>
> a timing when the second switching element is turned on is later than a timing when the first switching element is turned on.

The output voltage of the first switching element 3 is shown in the voltage waveform at point a of Fig. 2. The output voltage of the second switching element 17 is shown in the voltage waveform at point e of Fig. 2. As shown at these two waveforms of Fig. 2, an OFF period (from t_5 to t_2) of the second switching element 17 is longer than the OFF period (from t_6 to t_1) of the first switching element 3. Further, a timing (t_6) when the first switching element is turned off is later than a timing (t_5) when the second switching element is turned off. Further, a timing (t_2) when the second switching element is turned on is later than a timing (t_1) when the first switching element is turned on.

As described above, Takegami includes a switching element 2 (first switching element) Takegami also includes switching element 22 (second switching element). (Fig. 1). As shown in Fig. 2(b) and Fig. 2(c), the a timing when the first switching element 2is turned on is the same as the timing when the second switching element 22 is turned on. Thus, the fluctuation

of the delay characteristics may cause destruction of switching elements because both switching elements 24 and 25 are also simultaneously turned on.

New claims 6 and 7 have been added. Basis for new claim 6, may be found, for example, at page 9, lines 16-22 and Fig. 1. Basis for new claim 7, may be found, for example, at page 12, lines 14-5 and Fig. 3. No new matter has been added.

In view of the foregoing amendments and remarks, this Application is in condition for allowance which action is respectfully requested.

Respectfully submitted,

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